UNDRO NEWS

July/August 1991

- **China: Millions affected by devastating floods**
- **ECOSOC: Debate on Humanitarian Assistance**

OFFICE OF THE UNITED NATIONS
DISASTER RELIEF

BUREAU DU COORDONNATEUR
DES NATIONS UNIES POUR LES
SECOURS EN CAS

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UNDRO NEWS (ISSN 0250-9377)

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Publié tous les deux mois par le Bureau du Coordonnateur des Nations Unies pour les secours en cas de catastrophe.
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Editorial

One important effect of our daily exposure to news of the latest events on the world stage, brought to us in a constant stream by the media, has been the growth in international awareness of the need for humanitarian assistance of various kinds. Yet, as we seek new solutions to perennial human problems, it may be just as sensible to check whether existing systems have been sufficiently tried and tested before they are rejected; otherwise the response from the international community may result, inadvertently, in throwing out the baby with the bath water.

The threat of natural or man-made disasters, for instance, can still best be met by effective prevention policies. The actuality of such disasters can still best be minimized by competent preparedness measures. Initially such procedures should be taken by the government and people of the country concerned; yet the scale of such disasters often defeats the most determined self-help efforts of a country vulnerable to disaster, and forces it to seek out - side aid. In such cases, the United Nations - together with intergovernmental, governmental and non-governmental organizations, working impartially and with strictly humanitarian motives - remains the best vehicle to bring about such aid. Co-operation and co-ordination are the indispensable factors in such a task. UNDRO's founding mandate, based as it is on both of these concepts, gives it particular relevance in this field.

In addition to the present structures, co-operation between the country involved and the United Nations and other agencies could include more recent concepts, such as the setting up of relief corridors to ease and quicken the transit of humanitarian assistance. Co-ordination methods

Conséquence directe du flot continu d'informations et d'images médiatiques illustrant l'actualité internationale, la prise de conscience quant à l'urgence de l'aide humanitaire - sous ses diverses formes - va croissant. D'où notre incessante quête de solutions nouvelles aux lancinants problèmes humanitaires auxquels nous sommes confrontés. Mais peut-être devrions nous, dans le même temps, avoir la sagesse de nous demander si les systèmes existants ont été suffisamment mis à l'épreuve avant de les récuser. A défaut, la communauté internationale ne court-elle pas, en effet, le risque de jeter, sans l'avoir voulu, le bébé avec l'eau du bain?

Une chose, en tout cas, est certaine : une politique efficace de prévention est le meilleur moyen de faire face à la menace que représentent les catastrophes naturelles ou celles provoquées par l'homme. La mise en place de mesures de prévention adéquates est le meilleur moyen de réduire l'ampleur des désastres. Ces mesures devraient, bien sûr, être prises en priorité par le gouvernement et la population des pays concernés. Pourtant, l'ampleur de certaines catastrophes réduit souvent à néant cette volonté de prise en charge par les pays les plus vulnérables, et les incite à rechercher une aide extérieure. Les Nations Unies, conjointement avec les organisations gouvernementales, intergouvernementales et non gouvernementales, agissant de façon impartiale et dans un but strictement humanitaire, demeurent le meilleur moyen de fournir une telle aide. Deux facteurs doivent conjuguer leurs effets pour parvenir à cette fin : la coopération et la coordination. Le mandat de l'UNDRO, fondé sur ces ceux concepts, donne à ce Bureau un rôle particulièrement important dans ce domaine.

La coopération entre le pays où se produit la catastrophe, les Nations Unies et les autres institutions specialisées pourrait se doter de nouveaux concepts qui viendraient s'ajouter aux structures actuelles. La mise en place, par exemple, de couloirs d'urgence, permettrait de faciliter et d'accélérer le transit de l'assistance humanitaire. Les systèmes

READEX FICHE

must be based on extensive preparatory work, including, for example, the drawing up of sophisticated registers of those with expert knowledge of the delivery and management of emergency humanitarian relief. Existing registers should be standardized and unified so that the United Nations, with the consent of the country concerned, can make an accurate and speedy assessment of immediate and long-term needs and determine the best means of delivering aid. Much of this type of preparatory work has been done, but much more still needs to be undertaken to support a credible coordination effort.

Whether our endeavours to achieve greater success in providing such help are based on old or new concepts or techniques, it is always necessary to remind ourselves that those we are seeking to help are individuals - not just nations, or "Member States", but individual people in need. If we lose sight of this simple fact, we run the risk of the existing bureaucratic/political machines crushing our best efforts, whether newly-designed or proven by experience.

de coordination doivent être l'aboutissement d'une préparation expérimentée qui comprendrait, entre autres, la compilation de "registres" donnant une liste exhaustive des spécialistes en matière de gestion et d'acheminement de l'assistance humanitaire d'urgence. Ces "registres", réunis sous une forme standardisée, permettraient aux Nations Unies, en accord avec les pays touchés par la catastrophe, d'établir, aussi rapidement que possible, une juste évaluation des besoins immédiats et futurs. Cela leur permettrait également de déterminer les moyens les plus efficaces d'acheminement de l'aide. Une grande partie de ce travail préparatoire a déjà été effectuée mais il reste encore beaucoup à faire afin de soutenir un effort de coordination crédible.

Mais l'essentiel n'est pas, dans notre volonté de fournir une aide plus efficace, de nous demander s'il faut faire appel à des techniques ou à des concepts déjà éprouvés ou à créer. L'essentiel, c'est de ne jamais oublier que ceux que nous voulons aider sont des individus - pas simplement des Nations ou des "Etats Membres". Si nous perdons de vue cette évidence première, nous courons le risque de voir tous nos efforts anéantis par la machine politique et bureaucratique, que notre démarche soit traditionnelle ou novatrice.

The man pictured above is not just a statistic - one of the 220 million people affected by the recent floods in China - he is an individual who has lost his home.

Millions affected by devastating floods in China

The recent floods which swept across 13 of China's 30 provinces were the worst in over fifty years, despite the fact that all types of natural disaster frequently afflict the vast territory which is home to nearly one-quarter of the global population. Two hundred and twenty million people, almost one-fifth of the 1.1 billion inhabitants, were affected by the devastating floods following relentless storms which began on 18 May and continued for over a month to deluge the nation's eastern provinces. More than nine million people were evacuated from the stricken areas, over two million houses collapsed and twice that

Villagers struggle to salvage possessions as the flood waters rise in Shou county, part of one of the worst-affected provinces, Anhui.

China News Agency Photo

amount - together with some five thousand hospitals - were damaged. Remarkably, the death toll of 2,295 was light considering the scale and effect of the inundations. The direct economic loss was dramatically high, and is estimated at 68.5 billion yuan (US $12.9 billion), including the loss of 3.5 million tons of grain as a result of close to 20 million hectares of cropland being submerged by flood water.

The catastrophic situation was worsened by heavy rains in the north, a succession of typhoons which struck three southern provinces, and a drought so severe that five million people in a south-eastern province

China News Agency Photo

Medical workers wading through flooded streets in Jiangsu province. Over 87,000 medical personnel were sent to the stricken areas, where 20% of the population were reported to be suffering from dysentry and malaria.

suffered their worst water shortage since 1949.

The floods, which peaked in June and again in July, affected various areas in different ways. In some places the water level rose slowly, giving the population time to prepare for evacuation and to salvage belongings, including food supplies. In many more areas the floods had an immediate impact due to the collapse of dams or flood-gates, or the deliberate blasting of dams to protect vital infrastructure or valuable industrial areas. The priority, in such places, was the saving of lives, not possessions, and often called for the rapid evacuation of tens of thousands of people in a matter of hours.

In Anhui and Jiangsu provinces the floods were the worst in nearly a century. Torrential rains in Anhui generated flooding of the country's longest river, the Yangtze, swamping over forty thousand villages, some of which were deluged by four metres of water. In other villages, completely isolated and accessible only by boat, people struggled to survive in flimsy huts set up on top of dykes, themselves precarious after the rains. Over three-quarters of the 56.7 million inhabitants were affected, with 14 million being severely hit, and 556 people lost their lives. Eighty percent of the wheat crop in this important grain-producting province was lost, and 35% of its sparse cotton crop was threatened.

In the neighbouring coastal province of Jiangsu, local people, including workers released from factories, struggled to fill sandbags to protect the city of Nanjing, one of China's historic capitals. The low-lying areas around the district of Wuxi are some of the most fertile in the country. When Lake Taihu inundated the city and surrounding farmlands, people transported themselves in any accessible buoyant material, including wooden tubs, while others crowded onto roof tops with salvaged furniture and livestock to await rescue or the arrival of relief supplies. Forty-two million of the 64.3 million population were affected throughout the province, 7.4 million very severely, and nearly 18,000 villages were swamped by flood waters, causing 245 people to lose their lives.

National relief efforts

The Chinese Government places great importance on the combatting of natural disasters, and under its direction local authorities collaborate with each other in providing relief when disaster strikes. An impressive amount of assistance was thus mobilized after the floods, through the coordinating agency, the Department of Disaster Relief of the Ministry of Civil Affairs. All available local resources at central and local levels were organized to combat the floods and deliver relief assistance as over 21 million local people, army contingents and the Chinese Red Cross worked together to fight the disaster.

Relief efforts focussed on the provision of food and shelter, the improvement of sanitary and living conditions of the victims, the draining of flood waters and, where circumstances permitted, the planting of grains. Prevention of epidemics was high on the list of priorities since up to 25% of the population in the stricken areas were reported to be suffering from dysentry and malaria. Over 700 medical and anti-epidemic teams, involving around 87,000 medical personnel, were sent to the flooded provinces. The Chinese State Council distributed 250 million kilos of grain in the disaster area, in addition to providing 400 million yuan (US $7.5 million) in disaster relief funds.

International relief efforts

In view of the unprecedented magnitude inflicted by the floods,

on 11 July the Chinese Government launched its first formal appeal for international assistance for disaster victims. Following the appeal, a United Nations fact-finding mission visited Anhui and Jiangsu provinces. The mission comprised a senior delegate from UNDRO and a member of the UNDP staff in Beijing. By the end of the month an action plan for delivery of relief assistance through the UN system had been drawn up on the basis of the findings of the mission, and following consultations with the Ministry of Civil Affairs. Full cooperation and logistical support had been extended to the UN mission by the Ministry, and by provincial and local authorities.

In response to the appeal, aid, amounting to US $7.3 million, was pledged by 14 donors (10 governments and 4 UN agencies). Their cash donations were channelled through UNDRO/UNDP and pooled in a cost-sharing project for the local purchase of relief items, including construction materials for shelters for the three million homeless, medicines and water-purification facilities.

The sum of US $4 million was allocated to Anhui, US $2 million to Jiangsu, and US $1.3 million to neighbouring Henan province. Approximately 80% of this assistance in the three provinces was allocated to purchasing building materials, including temporary shelters as well as more durable constructions for those unable to rebuild before the winter arrives. In many areas county authorities opted for semi-permanent constructions - planned to be erected by late August - built entirely with bricks and tiles, with the possibility of using the same materials for permanent buildings later on. Progress in the building of these shelters was accelerated by the voluntary participation of large numbers of local people. Ten percent of the assistance was earmarked for medicines and water purification facilities, the supply of which was monitored by the World Health Organization. A contingency fund was set up with the remaining 10% of the donated aid to cover any other emergency arising from the floods. Since no such major emergency arose, the fund was used to provide shelters (due to be completed by mid-September) for a further 25,000 persons in the most affected counties.

At a donor's meeting held in Beijing on 31 July, aimed at sharing the results of the fact-finding mission, the UNDRO delegate said he was deeply moved by the plight of the people affected by the floods in the five counties he had visited. The priorities established for the delivery of UN-administered assistance were aimed at responding to those needs not met by other donors, such as the International Red Cross. The UNDRO relief officer then left Beijing on a relief-delivery operation, monitored by UNDRO/UNDP and planned to be completed within two weeks. Once the emergency stage has subsided, and needs in the stricken areas become clearer, the UNDRO/UNDP resident representative in Beijing will meet the donors once again to discuss rehabilitation needs.

Regular meetings were organized by the resident representative for coordination and information exchange with donors, the UN system and NGO representatives, and will continue until the emergency phase is over. The rehabilitation phase, following such cataclysmic flooding, is not expected to begin before September and October. ■

China News Agency Photo

Government workers in Chiangzhou city, Jiangsu province, distributing food supplies to victims of the floods.

Emergency Preparedness - Getting the message across

The Canadian Example

by Michael Theilmann
Senior Communications Officer, EPC

Emergency public information planning starts long before a disaster strikes. It starts with creating a climate of emergency preparedness at the community level - making the man and woman on the street aware of what to do in emergencies.

Encouraging a nation-wide climate of emergency preparedness, including every Canadian community, is the challenge facing Emergency Preparedness Canada (EPC). The formula for success can be described in four words: research, planning, implementation and evaluation.

Reading the Public Mind

First, research. What is the public interested in? What kind of information do they want to hear? How do they get their information: TV? Newspapers? Radio? Free publications? Other, less formal sources? One of the simplest ways of answering this question is to monitor the media. What kind of emergencies grab the public attention? What angles do the media concentrate on? What is the public reaction?

In recent years, EPC has found from monitoring the media that the general public is usually more aware of natural or human-made disasters occurring.

EPC headquarters in Ottawa receives approximately 8,000 enquiries a year. These requests are analyzed by subject, providing valuable indications on the type of information people are interested in. EPC also conducts polls which help identify what Canadians do and do not know about emergency preparedness, and provide an idea as to how successful past efforts of the organization have been in educating the public in this important area.

The formula for success can be described in four words: research, planning, implementation and evaluation

Aside from determining what the public wants to know, EPC also has a responsibility to tell the public what they need to know about emergency preparedness. However, the initial research to determine the public climate provides the base on which to construct a communications strategy that will fulfil both objectives.

The Planning Process

Once information on the public environment has been gathered and analyzed, the next step involves the planning of specific messages to be communicated. Examples of some of the key EPC messages include:

- It is up to the individual to know what to do and to be prepared for emergencies.
- Disasters **can** happen here; plan for tomorrow today!
- Always keep on hand a portable battery-operated radio and spare batteries. In a disaster it may be your only link to the outside world.
- Don't use the telephone in an emergency unless it's absolutely crucial ... the lines are needed for emergency response workers.

However important and valuable a message may be, it is useless if no way can be found to convey it to the public. This is where the next main element - implementation - comes in.

Reaching the Target

Contrary to popular belief, it is not always necessary to employ a

lot of resources in order to get one's message across. While Emergency Preparedness Canada uses a multi-media approach involving a mix of television, radio and the printed word, the exact balance is carefully created to achieve maximum impact using the minimum of resources...and taxpayer dollars!

For example, during the period 1990-91, EPC prepared a series of short articles on emergency preparedness topics, such as *Emergency Preparedness for Seniors* and *Winter Driving*. For the comparatively low cost of approximately $2,000 per article, these items were distributed through Canada News Wire Service to all media in Canada. The net result: literally scores of newspapers reproduced the articles, in most cases verbatim. To have purchased that same amount of coverage would have cost tens of thousands of dollars. As an added bonus, the articles generated numerous requests for radio interviews from stations across Canada.

In moving from the national to the community level, the scale of planning may change, but not the fundamental process involved

In 1990, the amount of free time given by TV stations to airing EPC's 30-second public service announcements had an estimated value of $3 million. In addition to the success of low-cost public service announcements, EPC has also been receiving positive feedback from radio and television stations which have been offered story ideas for broadcast. Other vehicles, such as the *Emergency Preparedness Digest*, reach yet another very broad and important audience: private industry; municipal, provincial, territorial and federal planners; policy makers; first responders; hospital staff; academics and researchers, to name a few.

This type of creative merchandising of emergency preparedness will continue to be increasingly important as government cutbacks and budget restraints become more severe.

A successful illustration of 'getting the message across' is this photograph of senior citizens (at the Rescue Services College, Stockholm, Sweden) voluntarily participating in emergency preparedness exercises by simulating being rescued from a collapsed building.

Closing the Communications Loop

Solid research, careful planning and well-managed design and delivery of messages are all crucial elements in the communications process. However, as important as any of these, is being able to determine whether or not the desired messages got through. This represents the last step in the process - evaluation. Well, not really the last step, because evaluation must link back to research, the first step, because the same tools used to evaluate EPC's public information strategy are used to carry out research, namely: media monitoring, analysis of public enquiries and polling.

Research and evaluation are ongoing activities. Public attitudes change and these shifting trends must be taken into account in attempting to tailor messages for specific audiences. The evaluations conducted by EPC strongly suggest that its public awareness campaign has been effective. Since 1986, when we first started keeping such statistics, the number of public enquiries received has tripled, while requests for the Emergency Preparedness Digest have increased fourfold.

Community-Level Planning

In moving from the national to the community level, the scale of

(Continued on page 25)

ECOSOC:

Debate on Humanitarian Assistance

A spate of high-level discussions have taken place in recent months, at various levels of the international community, on how the provision of emergency humanitarian assistance by the United Nations system should best be organized. These discussions followed last year's General Assembly resolution 45/221, which requested the Secretary-General to "make proposals to ECOSOC for the strengthening of the capacity of UNDRO to fulfil its mandate". In his opening address to the Economic and Social Council's July session in Geneva, Mr. M'hamed Essaafi, the Disaster Relief Co-ordinator, welcomed the discussions since they signified a renewed commitment on the part of Member States "to the principle of international solidarity in humanitarian matters", although they also implied that the present situation regarding the "delivery of emergency humanitarian assistance is not regarded as satisfactory to some donors".

While agreeing with those who felt that the present capacity of the UN system to deliver such assistance must be improved, the Co-ordinator declared that "in order to improve the response of the entire system you have to look first and foremost at the central co-ordinating function which the General Assembly has mandated UNDRO to perform". He described a number of measures undertaken by his Office to strengthen the performance of the United Nations with regard to emergencies, including in the areas of relief co-ordination, management training, mitigation, communications, and search and rescue. These activities were undertaken in collaboration with operational agencies of the UN system, in particular UNICEF, UNDP, UNHCR, WFP and WHO, as well as with major NGOs, academic institutions and the International Red Cross.

Mr. Essaafi drew the attention of those present to other areas of progress, including a conference-room report on the strengthening of his Office. He mentioned also the setting up, with UNDP, of a disaster Management Training Programme to increase professional skills and enhance co-operation with country-level counterparts in the field of disaster management. He states that his Office has recently published a key policy document on disaster reduction for decision-makers and planners at the regional, national and local levels - the Manual on Disaster Mitigation - and will shortly produce a draft of the UNDRO/UNDP Disaster Management Manual, a compilation of all elements of disaster management. A comprehensive study on the enhancement of information management, communications and office systems at UNDRO was finalized earlier in the year, which, if necessary resources are available, will serve the disaster management community with timely and accurate information. His Office was also finalizing an authorative register of existing search and rescue teams, as a further step towards establishing international registers of relief capacities in Member States.

In conclusion, Mr. Essaafi said that there had been enough occasions when the existing co-ordination mechanism in the UN

system had proved that it can work. He added that given the well-documented history of his Office, "the point has come to ask whether we want a strengthened UNDRO to fulfil the full promise of its founding resolution twenty years ago."

Discussion in the following debate covered several of the points raised by Mr. Essaafi, but began with the proposal to appoint a new high-level co-ordinator on humanitarian issues. Several western countries supported this proposal, including Canada, Sweden (representing the Nordic countries), and the United Kingdom. The delegate from the Netherlands, on behalf of the European Community, also recommended such an appointment, seeing the task involved as being one of setting up and maintaining, on the political and administrative level, "the links, impetus and direction needed to ensure that emergency-assistance missions proceed smoothly".

The validity of the proposal was questioned by United Nations agencies, as well as a number of Member States. The United Nations Commissioner for Refugees, Mrs. S. Ogata, agreed that it was impossible for any UN agency to handle large-scale emergencies rapidly or effectively without some fundamental changes in the system. However, she urged against adding an additional layer of bureaucracy to that system and recommended, rather, that "emphasis be placed on improving our existing system of co-operation, buoyed by a mutually-reinforcing stand-by emergency response *capacity* and a well-defined standing mechanism for inter-agency *co-operation*".

In the continuing debate, the Associate Administrator of UNDP recommended that since relief, rehabilitation, reconstruction and development are part of the same continuum, "the chasm that has long divided 'relief' practitioners from 'development' practitioners must be bridged". This important point was underlined by several delegates from the developing countries. The Brazilian delegate also stated that any attempt to treat so-called complex emergencies as if they were no different from a natural disaster situation could entail complex consequences. He pointed out that UN activities in the field of humanitarian assistance "do not and should not constitute infringements of the national sovereignty of the affected country". Any recognition of such a 'right', he went on, implied "delicate legal problems of interpretation or even possible amendments to the UN Charter".

Opposition to the appointment of a new high-level co-ordinator, was also raised by several countries who preferred to stress the need to strengthen the structures already in existence. The Moroccan delegate spoke of his anxiety on whether the creation of such a highly-conspicuous post "would be a mainstay in controlling the Organization, diverting it from its priorities and, ultimately, a tool for greater marginalization of the developing world".

The delegate from Mexico expressed the view that the creation of such a post would not get to the heart of the problem since the capacity of the new official to respond to emergency situations would be severely limited in view of the financial crisis the UN agencies are experiencing. He suggested that the proposals made by the Secretary-General to the General Assembly "should take into consideration the financial and human resources required to strengthen the capacity to respond, as well as defining the mechanisms for inter-agency co-operation".

The delegate from Japan also emphasized that it is more important "to strengthen and improve the capacity of the existing machinery than to create new entities". This point was underlined by the Algerian delegate who said that the need for existing institutions to adapt to new situations, "does not necessarily mean an institutional evolution or the creation of a new mechanism". He proposed that attention should rather be focussed on the co-operation existing among the specialized agencies of the UN system in order to strengthen their capacities and avoid further overlapping of responsibilities, and that co-operation in the field should be further strengthened and the role of the UNDP/UNDRO resident representatives should be emphasized.

This proposal was echoed by several delegates, from both the developed and developing worlds, who supported the General Assembly call for the strengthening of UNDRO, as was made clear by the Syrian delegate who renewed his Government's support of UNDRO and its Co-ordinator. The delegate from Morocco declared that the entire ***raison d'être*** of UNDRO "lies in emergency situations at all phases, from prevention and preparedness to rehabilitation, including assistance and training". The Egyptian

delegate pointed out that all proposals "should be presented to the General Assembly to ensure the participation of all UN Member States in the decision-making process". The delegate from Australia, while stating that UNDRO should have no new responsibility for the implementation or management of relief operation, agreed that it "should be strengthened and indeed improved in its role as a clearing-house of information and in its disaster prevention and mitigation work". The United Kingdom delegate, who paid warm tribute to the work of UNDRO over the last two decades, asserted that his delegation was "not trying to set up new systems which will lead to interference in the internal affairs of Member States who are facing disasters and emergencies".

The debate included a discussion of improvements in the field of disaster prevention and preparedness, as had been mentioned by Mr. Essaafi in his opening address. On behalf of the European Community, the delegate from the Netherlands proposed the establishment of up-to-date registers of all the human and material resources available within the UN framework, and from states, other donors and NGOs, for mobilization at short notice in different emergency situations. Delegates supporting this proposal included those representing Australia, Canada, Egypt, Japan, the Netherlands, and the United Kingdom.

The need for a central emergency fund also received support from these same delegates, as well as from others including the Moroccan delegate, who proposed that such a revolving fund should be set up, in the name of the Secretary-General, for all emergency operations to facilitate the task of donors from all parts of the world, and should be regularly replenished during the pledging conference or on the occasion of joint appeals. He suggested that the fund should be managed in a decentralized way, by UNDRO and UNHCR, or by other organizations with exclusive competence in disaster situations, each according to its area of concern.

The need for improving training facilities in the field of disaster management also received support from many delegates. The delegate from Canada attached great importance to the training of professional staff within UNDRO and UNDP and among national co-ordinators charged with humanitarian relief, pointing out that his government was funding the joint UNDRO/UNDP Disaster Management Training Programme and encouraging others to consider doing likewise.

On the subject of general funding, the delegate from Sweden observed that at present "some 80 per cent of the resources for humanitarian response are provided by about ten donor countries", adding that with increased demands for humanitarian assistance, the donor base needed to be broadened, and the lead time for relief supplies (whether in cash or kind) should be reduced considerably.

Other areas which delegates maintained needed strengthening or improving included management information systems. This point was noted by the Moroccan delegate, who suggested establishing a "centre for the urgent dissemination of recent and reliable data", evaluating the impact of post-disaster emergency relief, and helping affected countries to set up prevention and preparedness machinery and early-warning systems. He also proposed the storing of sufficient supplies of relief materials at UNDRO's Pisa warehouse, to be backed up by regional warehouses strategically located in high-risk areas.

A Standing Inter-agency Committee was proposed and supported by several delegations. The Australian delegate, among others, suggested that such a committee, to be set up on a permanent basis, should meet regularly in Geneva, and should involve both UN and other agencies who would meet automatically in response to any major humanitarian emergency.

There was a broad consensus of support for the aims and objectives of the International Decade for Natural Disaster Reduction (IDNDR). The Disaster Relief Co-ordinator, in supporting the aim of the Decade to reduce the impact of disasters, said: "in line with global efforts for sustainable development and environmental protection, the IDNDR will place disaster mitigation rightly in the framework of the revived discussions on overall strategies of humanitarian assistance as part of a global peace process." He added that the Decade would provide a framework within which "we will be able to execute our responsibilities with increased vigour, with a reasonable prospect of support and success".

Earthquake Education in Schools

According to the National Center for Earthquake Engineering Research, 39 of the 50 U.S. States are vulnerable to moderate or major seismic risk. In Canada, most of the heavily populated regions are also at risk.

As children spend a significant portion of their day in schools the community needs to be well prepared to meet school earthquake emergencies in this time and place. The development of an effective disaster preparedness programme requires an understanding of the natural processes involved and the type of dangers they pose to the school community.

The National Center for Earthquake Engineering Research has recently published the formal proceedings from their 1989 Conference on Disaster Preparedness - The Place of Earthquake Education in our Schools. Co-sponsored by the Federal Emergency Management Agency (FEMA) and Emergency Preparedness Canada, the Conference had 21 speakers which addressed issues relating to the challenge of preparing educators and schools officials to face earthquakes.

In this century, earthquakes in North America alone have resulted in more than a 1,000 deaths and billions of dollars in property damage. Earthquake education that provides an understanding of the causes of earthquakes, their impacts, and the necessary steps to reduce loss of life is essential to the physical and emotional well-being of students.

Following the conference, the Educational Advisory Committee of the National Center for Earthquake Research emphasized that tomorrow's adults need to be aware of the dangers that earthquakes present to our communities and how to achieve a greater level of safety through:

- *building codes to ensure more earthquake-resistant structures*
- *training in earthquake safety methods to be employed during and after an earthquake*
- *improved levels of preparedness in schools, homes and businesses.*

The proceedings published by the National Center for Engineering Research contain presentations by the 21 speakers. Single copies are available free of charge from Ms. Katharyn E.K. Ross, National Center for Earthquake Engineering Research, S.U.N.Y. at Buffalo, Red Jacket Quadrangle, Buffalo, New York 14261, U.S.A.

Reproduced from the Journal Emergency Preparedness Digest, April-June 1991.

International Seminar on "Urban seismic disasters, seismic resistant construction code and insurance" Santiago de Chile (Chile) 21-24 October 1991

The Seminar is organized by the Office of the United Nations Disaster Relief Co-ordinator (UNDRO), Geneva, within the framework of the UN International Decade for Natural Disaster Reduction (IDNDR), in co-sponsorship with the "Compañia Internacional de Reaseguracion", (MAFRE), Madrid, the Economic Commission for Latin America and the Caribbean (ECLAC), Santiago de Chile, and the United States Geological Survey, Denver.

The Seminar's principal objective is to promote the exchange of recent technical information on integral multi-disciplinary work aimed at the reduction of seismic risks through the practical application of the appropriate seismic resistant building codes, insurance policies and other mitigation measures. It aims to bring together an intersectoral group of academic, governmental and private industry experts to present the results of research and past experience and to propose priorities for future mitigation actions and appropriate policies.

Two principal working groups will be set up during the Seminar on:

- Seismic resistant construction codes and
- Seismic disasters: insurance and re-insurance.

For further information, please contact: *Mr. Dusan Zupka, UNDRO, Palais des Nations, CH-1211-Geneva 10, Switzerland*

UNDRO at Work

July/August 1991

Relief: Mobilization and Co-ordination

■ **Horn of Africa:**
A relief programme and an appeal for US $376.24 million to meet the basic needs of millions of victims of drought and civil conflict in Djibouti, Ethiopia, Somalia, Sudan and Kenya, were presented at an Information Meeting chaired by the Disaster Relief Co-ordinator, in Geneva on 19 July.

❒ An UNDRO representative took part in regional consultations on the Horn of Africa, in Nairobi on 29-30 July, which was attended by Under-Secretary-General James Jonah, UN Resident Co-ordinators and Representatives from UN agencies.

■ **Bangladesh - Cyclone:** In early July, UNDRO sent a delegate to Bangladesh to follow up relief activities undertaken after the cyclone which struck the country on 29 April. *(See article in UNDRO News March/April 1991 pp. 5-7).*

UNDRO is currently implementing a relief programme in Bangladesh, made possible thanks to contributions from several donors, including Austria, Canada, Finland, Ireland, Italy, Luxembourg, New Zealand, United Kingdom and OPEC.

A special meeting on Bangladesh was convened by UNDRO on 16 July 1991, in Geneva, to review the process of economic and social recovery in the country in the aftermath of the cyclone. The meeting was chaired by Mr. Bernard Kouchner, Secrétaire d'Etat auprès du Premier Ministre, Chargé de l'Action Humanitaire. A comprehensive report prepared in Dhaka, Bangladesh, by a joint Government/UN Inter-Agency Task Force, was presented at the meeting.

■ **Benin - Floods:** Following torrential rain in mid July, the Southern part of the country was affected by severe floods, and about 10,000 ha of crops were devastated. UNDRO allocated an emergency grant of US $20,000 and issued two Situation Reports. The UNDRO/UNDP representative chaired meetings to co-ordinate relief activities with representatives of the international community and UN agencies on 22 and 26 July. Total contributions reported to UNDRO amounted to over US $200,000.

■ **Cambodia - Floods:** Following the most severe floods to hit Cambodia for 37 years, UNDRO issued three Situation Reports between 23-30 August in response to an appeal for international assistance made by the Government on 22 August.

Preliminary estimates reported to UNDRO indicate that approximately 200,000 people have been affected, and that the number of deaths may rise to more than 100. Over 100,000 ha of crops were destroyed, and damage is estimated at about US $1.5 million.

■ **Chile/Argentina - Volcanic Eruption:** Mt Hudson volcano, in Southern Chile, erupted with great violence on 8 August, causing very thick ashfall, which damaged farmlands and polluted lakes and rivers in both Chile and Argentina. 1,200 people were displaced. UNDRO received a request for technical assistance from the Chilean and Argentinian Governments to monitor the effects of the eruption and to provide expertise/equipment for the field measurement of fluorides and other possible toxic substances. Three Situation Reports were issued. With the co-operation of the Government of the United States, UNDRO arranged to send an expert to the field.

■ **China - Floods:** An UNDRO delegate recently completed a five week mission to the People's Republic of China to co-ordinate relief activities following the severe floods which affected the provinces of Anhui, Jiangsu and Henan (eastern China). The delegate undertook two field missions to the flooded areas. Subsequently, it was agreed that first priorities should be given to shelters, medicines and water purification facilities. Out of the total contributions channelled through UNDRO/UNDP, 180,000 persons were provided with shelters and 700,000 benefitted from locally purchased medicines

and water purification facilities. Nine Situation Reports were issued by UNDRO. *(See article pp. 5-7).*

■ **Costa Rica - Floods:** Heavy rainfall which started on 11 August and lasted several days caused extensive flooding of an area already seriously affected by an earthquake in April. Approximately 1,700 people had to be evacuated and numerous rural water-supply lines, as well as thousands of houses, were seriously damaged. An appeal for international assistance was made by the Government on 26 August and two Situation Reports were issued by UNDRO.

■ **Gulf - Financial Situation Report:** UNDRO is monitoring the funding situation of the United Nations Inter-Agency Programme for Iraq, Kuwait and the Iraq/Turkey and Iraq/Iran border areas issued by the Office of the Executive Delegate of the Secretary-General. Financial Situation Reports on contributions made for this programme by the international donor community are regularly issued. As at 9 August 1991, US $233.5 million had been received representing 51% of the total needs of US $460.3 million. UNDRO has established a database on contributions made for this specific appeal which is part of a larger report concerning all humanitarian relief contributions reported by the international donor community to UNDRO in the context of the Gulf Crisis since its beginning in August 1990; as at 1 August 1991, the total of these contributions stands at US $1.6 billion.

■ **Lebanon:** A UN Inter-Agency Needs Assessment mission, composed of 13 UN organizations/agencies was undertaken in Lebanon from 13-24 July. The UNDRO representative who participated in the mission made an assessment of emergency needs and discussed the implementation of three ongoing UNDRO projects funded by the EEC: repair of water and power supply systems and procurement and installation of batteries for the telecommunications system of Greater Beirut.

■ **Mozambique:**

The Government of Canada contributed Can $460,000 to UNDRO for the management of an air transportation programme for experts undertaking relief missions in the country. Due to the insecure situation within Mozambique, air transportation is the only means of reaching most parts of the country.

❒ The Commission of the European Communities has contributed ECU 1,597,330 to UNDRO, for a relief supplies procurement and distribution programme.

❒ The Government of Switzerland has extended by one year the secondment of a warehouse management expert to UNDRO.

■ **Myanmar - Floods:** Torrential rains in mid-July caused extensive flooding in the North of the country, destroying over 380,000 acres of cultivated land and affecting about 240,000 people. Following a request for assistance by the Government, UNDRO launched an international appeal and granted US $15,000 for immediate relief activities. As of 14 August 1991, three Situation Reports had been issued.

A joint UN assessment mission was undertaken to the affected area during which the UNDRO/UNDP representative confirmed the need for medium term rehabilitation assistance immediately after the emergency programme, since floods will prevent rice producing communities from harvesting this year.

■ **Panama:** About 20,000 people were affected in Bocas del Toro Provinces, following floods and landslides in mid-August. According to official estimates, two people were killed, ten were missing, and 61 injured. Four hundred homes were swept away by flood waters. UNDRO issued an Information Report on 20 August.

UNDRO Warehouse in Pisa

Goods donated by the Governments of Finland, Italy, Japan, Norway and USSR

Blankets
- 150X200 cm (80% wool)
- 150X210 cm (50% wool)
- 150X220 cm (60% wool)

Tents
- (12.5 m2)
- (24 m2)
- (32 m2)
- (43 m2)
- (46 m2)

Plastic water tanks
- (3,000 l)
- (3,500 l)
- (7,500 l)

Jerrycans (15 l)

Tarpaulins (24 m2)

Plastic sheeting
- (365 m2)
- (400 m2)

Plastic pails

Generators
- (4 kva)
- (6.5 kva)
- (12 kva)

Trailers for generators

Transformers

Extensible cables (50 m)

Kitchen sets

Family kits

Mallets

Pickaxes

Saws

Shovels

Spades

Nylon rope (reels 200 m)

Thermic containers

NBC Protection cloting

A kitchen set is composed of various cooking and table utensils.

A family kit includes a kitchen set, two jerrycans, various hand tools, a petroleum lamp, matches, soap and water purification tablets.

For further details and information on availability of goods in stock, please call UNDRO Geneva 7346011 - Ext.: 3290.

■ **Peru - Earthquake:** UNDRO issued an Information Report following an earthquake which destroyed the village of Maca (Arequipa region) on 23 July, killing 11 people and injuring 35. Several tremors shook the area in the subsequent days, while the Sabancaya volcano, located nearby, registered increased activity.

■ **Philippines - Volcanic Eruption:** Following the eruption of Mt Pinatubo which began on 8 June, *(see article UNDRO News May/June 1991)*, more than 200,000 people have had to be evacuated and sheltered in relief centres.

The Chief of UNDRO's Disaster Mitigation Branch undertook a field mission on 20 June in order to help assess the damage and co-ordinate relief needs.

UNDRO provided an emergency grant of US $25,000, issued 14 Situation Reports, and convened an information meeting on 5 July in Geneva to inform donors on relief needs and on future disaster management plans.

According to the latest official figures 322 persons had died, 39 were missing, and about 84,000 houses had been partially or totally destroyed; the damage inflicted was estimated at US $221 million. Total contributions reported to UNDRO amounted to US $58 million.

■ **Romania - Floods:** After seven years of drought, torrential rains caused extensive floods in the northeast of the country. Official figures indicated 88 dead, 19 missing and 15,000 affected, of which 8,000 were made homeless. Total damage was estimated at about US $50 million.

Following an appeal for international assistance on 2 August, UNDRO airlifted relief supplies, donated by the Japanese Government from its Pisa warehouse, sent a representative to assess the situation in the field, and issued four Situation Reports.

Total contributions reported to UNDRO amounted to US $555,434.

■ **Sierra Leone:** On 17 July, UNDRO issued an emergency appeal for approximately 80,000 displaced persons in eastern and southern Sierra Leone, following the incursion of Liberian troops.

■ **Somalia:** UNDRO participated in a UN Inter-Agency needs-assessment mission to Somalia, from 26 June to 4 July, to identify immediate relief and rehabilitation programmes. With financial support from the Government of the United Kingdom, an UNDRO delegate undertook a mission in the field, mainly to pave the way for possible UNDRO involvement in humanitarian assistance to the affected population of displaced people. The mission was carried out in close co-operation with the UN Special Co-ordinator for Emergency Relief Operations for Somalia.

■ **Viet Nam: Typhoon Fred** struck Central Viet Nam on 17 August. Official reports indicated 5 deaths, 16 injured and serious damage to infrastructure and agriculture. Total losses were estimated at US $9.5 million. Two Information Reports were issued by UNDRO as at 26 August.

■ **Search and Rescue:** UNDRO issued a report on the "International Search and Rescue Workshop 1991", which was hosted by the Austrian Armed Forces in Watterner Lizum (Austria) from 8 to 12 April 1991. The report contains four international search and rescue protocols aiming at enhancing the management of resources in this important field.

Disaster Mitigation

■ **International Hazards Seminar:** At the request of the Natural Hazards Society, UNDRO sent a senior officer to give an opening address at the Fourth International Seminar of this Society, held in Perugia, Italy from 3 to 8 August 1991 and attended by 88 participants from 29 countries. The UNDRO delegate also sat on the panel to review progress to date and future practical objectives for the IDNDR.

■ **Nepal:** A National Seminar on Disaster Management in Nepal was held in Kathmandu from 28 to 30 August 1991 under the auspices of the Special Disaster Unit in the Home Ministry. Present were representatives from all line Ministries, the SAARC Secretariat, political parties, Nepalese Red Cross, international and local NGOs, UN agencies, including an UNDRO staff member. The purpose of the Seminar was to discuss the draft of the National Disaster Preparedness Plan and outline a strategy for improved disaster response in the country.

■ **Saudi Arabia:** UNDRO has sent a consultant on a two-month mission to Ryadh to work with the Civil Defence Administration (CDA) in the area of strengthening relief response. The consultant will advise on the revision of existing relief manuals as well as assist in the preparation of a training programme for CDA relief officials.

Information, Communications, Exchange of Views and Contacts

■ **Disaster Management:** A Workshop organized by UNDRO on 2 July in Geneva, focussed on the policies and concepts of the UNDRO/UNDP Disaster Management Training Programme (DMTP) and on future aspects of

(Continued on page 26)

Women and Disaster Management

The following excerpts from an article entitled "The Role of Women and NNAs [National Nurses Associations] in Disaster Management" are reproduced with the permission of the *International Nursing Review* where the article first appeared in its November/December 1990 edition. While the guidelines described in the article were drafted in the Caribbean context, they are of general interest in the field of women and disaster management.

It has been recognized that female participation in disaster management planning committees in the Caribbean has been limited. To encourage women in various steps of the managerial system, meetings on the exploration and development of the role of women in disaster management, have been funded by the Canadian International Development Agency, and organized by the Pan American Health Organization with the collaboration of the Ministry of Social Development and Family Services, Trinidad and Tobago. Based on the work of these meetings, draft guidelines were developed for use as a developmental strategy to include women in the pre-disaster response and recovery phases. These guidelines can be adapted and modified by individual countries to serve as a catalyst for action by women.

The Guidelines

- **Community Level**

The focus at the community level should be on:

Development of human resources with particular emphasis on increasing and strengthening women's abilities and skills, as well as on opportunities for participation in disaster preparedness activities.

Education/training of individuals and families in homes, schools, workplaces and community, beginning with the socialization period throughout the individual's life cycle. This would entail including content to strengthen knowledge and skills in curricula from nursery through secondary school and in the educational programmes of women's organizations and community groups.

Innovative and creative training of women in both traditional and non-traditional skills, the latter including: operating communication equipment, participating in search and rescue operations, interviewing, designing and constructing disaster-resistant housing and making vulnerability analyses, data collection, shelter management, damage/needs assessment. More traditional skills - like first aid and managing feeding programmes - could also be strengthened.

Information management. Women could be mobilized to collect specific information on their respective communities (community profiles) to help identify and assess elements at risk in the community as well as the socioeconomic political structures that they can usefully engage to help secure their families' safety, assets and property. Information management skills will help identify and use communication systems - media resources, traditional, informal and folk - so that appropriate information on the disaster situation is disseminated in a timely manner and organized action taken.

Participation/representation on local emergency committees. Women are traditionally responsible for many of the activities necessary to the health and well-being of the community and should be fully involved in local emergency committees with at least 50% membership. This involvement and participation should permeate all phases from preparedness planning to recovery. Women's concerns and perspectives should be an integral part of this process.

The above framework conceptualizes women's role in disaster management at three levels of the national socio-economic-political system: community, managerial/technical and political during the predisaster, response and recovery phases.

Involvement/participation in recovery programmes. During the recovery period women's organizations and groups should participate fully and influence:

- The restoration and utilization of community-based health services.
- The restoration of education and other welfare services.
- The financing of recovery operations, particularly to help the most vulnerable groups such as female-headed households, pregnant and lactating women, children, the elderly and disabled.
- The reconstruction of affordable and disaster-resistant housing and shelters for affected community members.

■ **Managerial/Professional/ Technical Level**

At this level, the focus should be on:

Representation/participation in decision making. Representation (at least 50% membership) by women managers and technicians on decision-making bodies with impact on disaster management will facilitate the involvement of women at all stages of the managerial process.

Institutionalization of disaster management within existing sectoral programmes, including the formalization of a co-ordinating mechanism, paying particular attention to gender implications. A component on "Disaster and development" should also be incorporated in the action plans of all women's organizations and groups.

Education and training programmes should be designed to sensitize managers and technicians to women's roles as they relate to disaster management. Programmes and activities should also be organized to equip women with basic and lifeline skills, as well as with the critical facilities to improve their physical/material conditions and reduce their vulnerability to disasters. Further, promotion efforts should go toward integrating "Disaster Management" into all relevant curricula offered at tertiary level educational institutions.

Collaboration between relief and development agencies, particularly in women's programmes.

■ **Policy-making Level**

Here the emphasis should be on:

Encouraging women to be included in the political and policy-making process to ensure that women's programmes and national disaster plans are integrated into the overall development plan.

Re-examining structural adjustment policies in the recovery phase, given that in some countries these policies have a devastating impact on social services, particularly those designed for women and other vulnerable groups.

Minimizing political partisanship in recovery operations through the involvement of national and international organizations with a reputation for impartiality.

Developing policies to extend insurance coverage to low-income housing that meet acceptable standards as well as to food crops.

Enforcing land-zoning regulations by all governments, especially in view of environmental changes.

Collaboration between women's organizations and national disaster management agencies. An institutional framework to formalize permanent working relationships between women's organizations (including community groups) and national disaster management agencies must be created. All agencies should recognize and support community initiatives.

Initiating and supporting gender specific research that will determine the vulnerability of women to disaster and use these findings to begin programmes to reduce vulnerability and enhance the capacities of women and women's groups. ■

International Decade for Natural Disaster Reduction

by Pilar Brabo Castells
Director General of Spanish Civil Protection

The United Nations initiative declaring the 1990s the International Decade for Natural Disaster Reduction aims to correct one of the gravest effects of North-South inequality: inadequate preparedness in the very countries most susceptible to catastrophes.

In the last five decades, many countries of the North, including the USA, Europe and Japan, have developed and perfected the three basic elements of protection against natural risks:

■ **Systems of efficient prevention**

These systems include anti-seismic building norms, hydraulic works against flooding and drought, reafforestation and soil conservation and so on. They involve integral planning and area development taking due heed of disaster risks and setting in motion appropriate planning and infrastructures.

■ **Systems of advanced and prompt warnings against the likelihood of calamity**

Although certain risks, such as earthquakes, are unpredictable in the short term, the progress achieved in meteorology, vulcanology, the installation of networks of pluviometers, gauging stations and barrages, enable most of these countries to raise prompt warnings, in nearly every case, against hurricanes, tsunamis, torrential rains, floods and volcanic eruptions.

■ **Emergency plans efficiently set in motion and known to the population**

Policies of prevention reduce the effects of natural phenomena but obviously do not suppress them. Dependant on circumstances, early warnings enable them to be tracked down well in advance. The drawing up of emergency plans known to the population helps to promote order in the chaos involved in every grave natural risk. To know in advance the points from which, and to which, a population must be evacuated, the enumeration and classification of available resources (means of transport, material for the clearing of rubble, provision of water and food supplies, sanitary resources or replacement equipment, etc.) within the framework of a structure where everyone knows in advance his specific task, is the only way to save lives and relieve suffering in an emergency.

Above all it is a question of the population knowing the risks and being prepared to face them. In the countries of the North, this preparation usually begins at school.

The countries of the Southern hemisphere, however, find themselves in a very different situation. Until now the Northern countries have not reduced the Southern disparity and have even contributed to it by practices such as massive deforestation which have further diminished Southern protection against many natural dangers.

For these reasons, the essential objective of the Decade is solidarity, not only by sending help when disaster has already struck. This new solidarity will consist in supplying technical and scientific instruments to the South and equipping it with precise organization strategies so that its capacity to act against natural phenomena equals that of the North.

What should be the role of Spain in this enthralling task which the United Nations has set for the

Decade? Without doubt the country's capacity falls between that of the North and the South; it is nearer to the North but still a certain distance from it.

In the field of prevention, Spain should achieve a major effort during the Decade. Concerning the type of natural disaster which occurs most often in Spain, namely floods, a policy of establishing hydraulic works has been undertaken in the last five years. The origin of this policy goes back to the Second Republic, and it has notably limited the risks of drought and gradually reduced major floods; however, as we realized recently, we are not yet free of one or other of these alternating dangers. The gravest problem confronting us is insufficient area development, or rather the badly-conceived development of our territory, undertaken during the 1960s and 1970s when the Northern countries often acted in a negative way. Hastily-planned touristic and industrial development, which also affected communications and urban agglomerations, led to results which needed verification and often alteration.

It would not be realistic to believe that we have already put an end to our deficiencies in town and country planning. Those responsible have not yet become fully aware that it is not possible to consider building housing developments or estates, industrial centres, multisports stadia, camping sites or amusement parks in zones which have always been subject to risks of flooding. **For this reason, I believe that one of the essential aims of the Decade, as far as Spain is concerned, should be to stimulate new awareness in area planning and development.**

The present anti-seismic regulations of Spain date from 1974. The drawing up of newer measures is well advanced. The beginning of the International Decade for Natural Disaster Reduction is a good occasion to achieve this project and enable those responsible to revise norms and consolidate surveillance techniques.

Advances in early warnings have been made in recent years. In the Jucar river region, the National Institute of Meteorology has established a radar system, facilitating advanced alerts, regarding weather phenomena peculiar to the Mediterranean tributary region such as the popularly-known "Gota Fria" (the cold drip) characterized by its very sudden formation which makes forecasting difficult (SIVIM System).

In this region, the Directorate General of Hydraulic Works is engaged in experiments in computerized gauging of water flows, enabling it to learn the location of flooding threats several hours in advance (SAHI System). **I feel that an aim of the Decade should be to set such systems in motion in all the catchment areas of Spain within three years.**

A similar view may be taken of the third basic element. Emergency planning for facing up to the menace of floods is being improved and is showing increasing proof of efficiency. The revision of measures coping with earth tremors has been bolstered during the last year. It is recognized increasingly that preparedness, actualization and setting in motion plans for emergencies come under the purview of civil defence and that these tasks demand highly qualified staff with technical knowledge and adequate training both at local and regional stages as well as at State level.

With the support of all relevant institutions, the Decade can be regarded in Spain as a period in which radical change must take place regarding the population's attitude to civil defence. The creation of a **Civil Defence School** - foreseen and encouraged by our Directorate General, and which could function before 1992 - will be the most efficient instrument for the future.

To sum up, during the Decade Spain must be prepared to set forth on the road which by the end of the period will lead us to the same level of preparedness as the most advanced countries of our hemisphere.

However, we must not forget our duty of solidarity. We shall certainly head the countries with whom, for historic and geographic reasons we have an affinity: those of Latin America and North Africa. Our aim in this matter should be that our progress is also theirs. To this end, it behoves us to spur scientific and technical cooperation in this sphere of advanced technology and to intensify contacts and relations between the different organs of civil defence as well as to strengthen the ties which exist already with Morocco, Colombia, Mexico and Argentina, while extending them to all countries of both North and South.

The above article is reproduced with the permission of the International Civil Defence Journal, where the article first appeared in its Jan.-Mar. 1991 issue. ■

UNIENET

United Nations International Emergency Network

Within the framework of the enhancement of its information systems, UNDRO is developing UNIENET. This network of computers, linked together electronically, places members of the world-wide disaster management community in direct contact with each other, and provides them instantaneously with both background and operational disaster-related information. UNIENET operates as a joint venture with U.N. agencies and other intergovernmental and non-governmental organizations.

Should you already be a UNIENET user, or should you wish to consider joining the network, we would be pleased to provide you with more information.

For potential new users :

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Name: .....
Organization: .....
Address-Street: .....
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Fax No.: .....
Telex No. .....

Brief description of principal functions of organization/individual:

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UNDRO NEWS

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EARN/BITNET UNDROREG@UNICC

National Emergency Relief Services (NERS) Meeting 1-2 October 1991

UNDRO will be hosting the fourth NERS meeting at its Headquarters in Geneva from 1 to 2 October 1991. (Previous meetings were held in 1986, 1987 and 1989.) The specific purpose of the NERS meetings is to provide Government officials, in charge of formulating and implementing national policies in the area of international emergency relief assistance, with an opportunity to consult periodically with UNDRO, and with their colleagues from other countries. These mostly technical meetings are particularly concerned with concrete and practical measures designed to further strengthen emergency/ disaster management through international collaboration in disaster relief and mitigation.

This year's session will precede the General Assembly's consideration of "Strengthening co-ordination of the UN's Humanitarian Emergency Assistance" in the light of the ECOSOC debate on this matter in July this year.

The meeting will be conducted in English and French; simultaneous interpretation in both languages will be provided.

1991 Report
UNDRO Involvement in Disasters as at 21 August 1991

Affected Country/Region	Disaster	Total No. Sit./Inf.*
JANUARY		
Middle East/Persian Gulf	Displaced Persons (Phase II)	Sit. 20
Myanmar	Earthquake	Inf. 1
FEBRUARY		
Afghanistan	Floods/Earthquake	Sit. 9
Iran	Floods	Sit. 5
Pakistan	Earthquake/Floods	Sit. 6
Peru	Cholera	Sit. 9
MARCH		
China	Hailstorms	Inf. 1
Colombia	Cholera	Inf. 1
Ecuador	Cholera	Inf. 1
Malawi	Floods/Landslides	Sit. 4
APRIL		
Bangladesh	Cyclone	Sit. 10
Latin America	Cholera	Sit. 6
Middle East/Persian Gulf	Emergency Situation (Phase III)	Sit. 16
Gulf- Financial Reports	Emergency Situation (Phase III)	Fin 10
Mongolia	Severe Winds/Snow/Steppe Fire	Sit. 2
Myanmar	Fires	Sit. 3
Panama	Earthquake	Sit. 3
Peru	Earthquake	Sit. 3
Uruguay	Floods	Inf. 1
USSR-Georgian SS Rep.	Earthquake	Inf. 2
MAY		
Costa Rica	Earthquake	Sit. 5
Jamaica	Floods	Inf. 1
JUNE		
Afghanistan Jawzjan Prov.	Floods	Inf. 1
Chile	Heavy Rain/Mudflow	Inf. 3
China - Anhui Province	Floods	Sit. 8
Colombia	Landslides	Inf. 1
Ethiopia/Djibouti	Fighting/Massive Influx	Sit. 1
Indonesia	Earthquake	Inf. 2
Maldives	Storms and Surges	Sit. 3
Philippines	Volcanic Erup./T.Storm/E.Trem.	Sit. 14
JULY		
Afghanistan	Earthquake (of 14 July)	Inf. 1
Bangladesh	Floods	Inf. 1
Benin	Floods	Sit. 2
Indonesia	Volcano (Erup. of 4 July)	Inf. 1
Myanmar	Floods	Sit. 2
Sierra Leone	Displaced Persons	Sit. 1
AUGUST		
Chile	Volcanic Eruption	Inf. 1
Panama	Floods/Landslides	Inf. 1
Peru	Earthquake	Inf. 1
Romania	Floods	Sit. 4
Vietnam	Typhoon "Fred"	Inf. 1

Note: 1. Peru, Colombia and Ecuador Cholera linked with Latin America Cholera after April 1991.
2. Afghanistan Floods and Earthquakes began as separate Sitreps but were eventually linked as one disaster.
3. Except when otherwise noted, Sitreps are issued in English exclusively.

*Key to Prefixes:
"Sit." = Situation Report (international appeal has been launched by UNDRO.
"Inf." = Information Report (predates international appeal).
"Fin." = Financial Report (only reporting for the Persian crisis at this time).

Announcement from an UNDRO Collaborating Center

Asian Disaster Preparedness Center (ADPC)
Director

The Asian Institute of Technology (AIT) is seeking a person to succeed the incumbent director of the ADPC who will be retiring in June 1992. The ADPC is a semi-autonomous unit within the framework of AIT - an autonomous, international institute based in Bangkok, Thailand, dedicated to serving the higher education needs of Asian-Pacific countries.

The ADPC

The ADPC has established a worldwide reputation for its work in assisting countries of the Asian and Pacific regions in formulating their policies and developing their capabilities in all aspects of disaster management. The Center offers a wide range of training, consultancy and information services related to the disaster needs of Asian-Pacific countries. In addition to regular programmes at AIT an increasing proportion of the Center's work entails direct support to national programmes. ADPC works in close collaboration with governments, non-governmental organizations, bilateral and multi-lateral international agencies and the private sector. It is an UNDRO Collaborating Center.

The Job

The director is responsible for conceptualizing, developing, and supervising the implementation of all the ADPC's programmes and for ensuring the financial viability of the center. He reports directly to AIT's Vice President for Development. He heads a highly motivated, expanding, multi-disciplinary, international team of 15-20 staff.

The Successful Applicant

You have extensive practical experience of disaster management. You know Asia and the Pacific. Well educated, you are highly motivated, independent of mind but also flexible, imaginative and innovative. You have the personality and presence to deal with senior officials of different nationalities from many walks of life. You have proven leadership and management skills. Experience of development planning would be useful.

A competitive salary and benefits will be offered commensurate with qualifications and experience. Remuneration carries no personal liability for income tax in Thailand. The initial appointment will be for two years.

To apply for this challenging position please write before 31st December 1991 with full CV, photograph and references to:

The Vice President for Development
Asian Institute of Technology
P.O. Box 2754
Bangkok 10501
Thailand.

The Tampere Declaration on Disaster Communications 22 May 1991, Tampere, Finland

We reproduce below the final draft of the Tampere Declaration, adopted at the Conference on Disaster Communications held in Tampere, Finland on 20-22 May 1991. The draft Declaration is based on the major needs identified and endorsed by UNDRO's Conference on Disaster Communications held in Geneva in March 1990.

The Declaration addresses, inter alia, specific areas in emergency response management which should be improved in order to facilitate the dissemination and use of telecoms, satellite (especially remote sensing), and broadcasting technologies in the disasters context. (See article on the conference, UNDRO News, March/April 1991).

Purpose

1. The group of experts in communications and disaster management participating in the Conference on Disaster Communications held at Tampere, Finland, from 20-22 May 1991, declare that there is an urgent need to improve international co-operation in communications and enhance national communications capabilities in order to reduce loss of life, damage to property and livelihoods, and damage to the environment caused by disasters. For the purpose of this Declaration disasters are viewed as extreme occurrences which outstrip the ability of an affected society to cope with them. Behind these events often lie chronic problems stemming from the interaction of natural, environmental and man-made factors. In this regard the Tampere Conference notes the proposal for a Pilot UN Centre for Urgent Environmental Assistance to be considered at the 16th Governing Council Session of the UN Environment Programme, Nairobi.

2. The Tampere Conference reiterates the primary responsibility of national authorities for disaster management and communications. The supportive role of international organizations in disaster management is highlighted. The Conference also recognizes the important role played by indigenous and international non-governmental organizations in disaster mitigation and relief.

3. The Tampere Conference recognizes that disasters have killed millions of people over the past twenty years alone and caused massive financial and other damage to people, property and the environment. Such disasters will continue to occur frequently around the globe, with particularly devastating consequences in the developing countries. Further efforts are required to prevent such disasters and alleviate their consequences.

4. The Tampere Conference stresses that improved flows of international information through terrestrial and satellite communications technologies can assist in the prediction, monitoring and early warning necessary to prevent some of the consequences and reduce the impact of such disasters once they have occurred. There is an urgent need to improve the nature, scope and quality of information being transmitted internationally, including its validity, significance, accuracy and timeliness.

5. The critical role of the mass media in providing public information services to communities at risk is recognized, as is their broader role in education and opinion-forming, particularly with regard to slow-onset disasters.

6. Terrestrial and satellite communications, including established international satellite networks, and remote-sensing technologies, have played, and will continue to play, major roles in reducing the devastating effects of disasters by dramatically improving hazard identification and risk assessment, disaster preparedness, monitoring, early warning and onset and post-disaster relief operations. These facilities are, in practice, not universally accessible, particularly in developing countries where such disasters most frequently occur.

7. Communications links are almost always disabled and disrupted during the first hours of a major disaster. When disaster strikes, there is an urgency to establish effective and comprehensive communications links at the disaster site, between the site and the national systems for dealing with disaster response, and with the concerned international community.

8. The Tampere Conference endorses the Preamble and Major Needs identified and the Recommendations adopted at the UNDRO International Conference on Disaster Communications on 21 March 1990 and held in the context of the International Decade for Natural Disaster Reduction (IDNDR).

9. The Tampere Conference calls for the development of a Convention on Disaster Communications as elaborated further below and to be negotiated not later than 1993. This Convention should be viewed in the context of a future comprehensive accord on disaster management.

10. The Tampere Conference recognizes the urgent communications needs generated by emergency disaster relief and the longer-term needs of disaster mitigation.

Communications in Disaster Relief

11. Present limitations to disaster communications include:

(a) Organizational barriers which impede the flow of information among the various elements of the international disaster response network.

(b) Uncertainty over the availability and location of communications equipment which could be made accessible for disaster use.

(c) Regulatory barriers which slow down the importation and operation of communications equipment.

(d) High costs which inhibit the effective use of communications equipment during disasters.

12. In order to overcome these barriers a Convention on Disaster Communications should, at a minimum:

(a) Establish an effective framework for co-operation between and among State parties, intergovernmental and regional groupings and entities, and non-governmental bodies, including international terrestrial and satellite telecommunications operating organizations and relevant commercial sector organizations.

(b) Further improve the co-ordination on international disaster management.

(c) Ensure the utilization to the maximum extent of existing global, regional and national terrestrial and satellite communications networks; encourage the immediate availability at national, regional and international centres of communications equipment; and encourage the development of the amateur radio services and their application to disaster communications.

(d) Encourage national authorities to establish an inventory and/or data base of their own communications equipment and resources relevant to disaster relief, national regulations to ensure access to them, and an appropriate national preparedness plan for their effective use.

(e) Encourage UNDRO, within the framework of the International Decade for Natural Disaster Reduction, to maintain an international inventory of communications equipment and resources and to invite national governments, intergovernmental organizations, non-governmental organizations and other relevant entities to make their own communications equipment and resources information available.

(f) Encourage improved and enhanced national and international training programmes to develop the necessary expertise in the rapidly-evolving field of disaster communications, and the further consideration of the communications issue in disaster management training programmes.

(g) Facilitate the rapid dissemination and effective use of communications equipment and resources by limiting, reducing and, where possible, removing, regulatory barriers including:

- Customs clearance procedures and duties
- Restrictions on possession and use
- Inappropriate restrictions on the dissemination of existing and new technical information
- The need for type-approval procedures and operating licences, including simplification
- National rules concerning the temporary assignment of appropriate radio frequencies.

(h) Establish appropriate further rules relating to matters such as:

- Entry, exit and transit for personnel, equipment and property
- Direction and control of assistance
- Confidentiality of information
- Privileges, immunities and facilities
- Claims and compensation.

(i) Establish the basis for an appropriate tariff structure for domestic and international communications carriers, including waiver of charges where appropriate, and the necessary philosophy and approach to payment for communications services required in disaster relief efforts.

Communications in Disaster Mitigation

13. Effective early warning systems and comprehensive data bases are limited by the unequal access to communications technology, software and expertise.

14. The proposed Convention should, at a minimum, establish mechanisms for international co-operation in the use of terrestrial and satellite communications technologies in the prediction, monitoring and early warning of disasters, especially the early dissemination of information to those in the at-risk communities.

The Way Forward

15. The Tampere Conference recommends that no later than 1993 an intergovernmental conference be convened under the auspices of UNDRO to prepare for the negotiation of an International Convention on Disaster Communications to establish appropriate mechanisms to improve international co-operation. This conference should be complementary to envisaged intergovernmental action to facilitate the use of communications equipment for disaster relief and to the global meeting of IDNDR National Committees proposed for 1993.

16. To carry through the above suggestions - the enhancement and improvement of disaster communications - will require a realistic financial commitment from the international community, including governments, international organizations, donor organizations, non-governmental organizations and the private sector.

17. The proposed Convention should take account of existing provisions and proposals, including Resolution No. 209 (Mob-87) of the World Administrative Radio Conference for the Mobile Services, Geneva, 1987, on the Study and Implementation of a Global Land and Maritime Distress and Safety System.

18. The development of the proposed Convention on Disaster Communications should be co-ordinated by UNDRO, in co-operation with the International Telecommunications Union (ITU) and other relevant organizations, including international terrestrial and satellite telecommunications operating organizations.

19. Recognizing that the development of such a Convention will take time, the Tampere Conference calls upon all States to consider urgent measures to give effect to the provisions of this Declaration on an interim unilateral or bilateral basis for general humanitarian reasons.

20. The Tampere Conference recommends that, consistent with the goals and objectives of the International Decade for Natural Disaster Reduction, the UN Disaster Relief Co-ordinator should take the appropriate steps to implement the intent of this Declaration with the support of, and in consultation with, other concerned bodies of the UN system, international terrestrial and satellite telecommunications operating organizations and non-governmental organizations.

21. The Tampere Conference recommends that this Declaration be circulated to governments, intergovernmental organizations and non-governmental organizations, and in appropriate international fora, such as the November 1991 International Red Cross Conference and the June 1992 UN Conference on Environment and Development, and be considered in the relevant activities of concerned organizations and institutions at the international, regional and national levels. ■

Emergency Preparedness - Getting the Message Across

(Continued from page 9)

planning may change but not the fundamental process involved. Some basic research is still the starting point in finding out what people in the community know about emergency preparedness. One way of gathering this information might be to run a quiz on emergency preparedness in the local newspaper. A write-in competition could be held with a small prize for the winner. As a minimum, the replies would provide a snapshot of awareness regarding emergency preparedness within the community and, possibly, clues as to areas where specific information is needed.

Based on research, messages can then be developed. Some examples could include:

- Our community could be hit by X,Y, and Z disasters.
- Know what to do if the community has to be evacuated.
- Make sure you always have an emergency food and water supply on hand.

A number of possible approaches can be used in getting the message across: speaking to the editorial or program personnel of the local newspaper, television and radio stations; proposing story ideas; seizing on newsworthy events and suggesting a local angle; inviting the media to participate in drawing up local emergency plans and covering or participating in emergency exercises; using such opportunities as the purchase of a new piece of equipment for fire or rescue services to invite the media to the unveiling. In each case, the ultimate objective is to use whatever opportunities can be found to drive home the desired emergency preparedness messages.

Some Help and Some Helpful Ideas

Emergency Preparedness Canada has information materials available to help, such as radio and TV Public Service Announcements (PSAs) as well as a variety of self-help pamphlets and brochures. Provincial and municipal organizations are welcome to adapt our PSAs for their own use. The Manitoba Emergency Measures Organization, for example, took some of our PSAs, inserted their own logo, and distributed them within the province. The same rule applies to EPC publications. Organizations are welcome to reproduce the contents of any of our booklets. For example, the emergency planning officer for Cornwall, Ontario, adapted information from an EPC booklet on earthquake preparedness, and combined it with local information such as emergency telephone numbers and the call signs of local radio stations, to create a low-cost pamphlet that can be reproduced in quantity on any photocopier.

There is also the Joint Emergency Preparedness Program (JEPP) through which the federal government provides partial funding for emergency preparedness projects - including public information activities. For example, a recently completed JEPP project in British Columbia helped cover the cost of a one-page insert for telephone directories which contained self-help advice on what to do in case of earthquakes or tsunamis.

Speaking to groups can be another effective tactic. And, since many groups have their own newsletters, new story ideas are usually always welcomed by editors, whether in the form of an original article or one reprinted from an EPC pamphlet or brochure.

Direct mail is another option. It may be possible to secure the co-operation of municipal authorities so that a pamphlet on emergency preparedness is included in the mailing of municipal water bills to householders. For example, a winter mailing could include information on what to do in a power failure. In summer, the topic might be severe thunder storms. Again, EPC can supply the basic information.

Ultimately, ingenuity, power of persuasion and plain old leg work will determine the success of efforts to inform community members about emergency preparedness issues. A decided advantage lies in the fact that just about everyone supports emergency preparedness. The key is to tap this support, possibly by focusing on the public service aspect of the subject.

The payoff will come the day a disaster hits your community, and you find that people stayed off the phones, they had emergency supplies on hand, and they knew what to do when the emergency struck. In short: the day you discover that your public information efforts paid off in the saving of lives. That, after all, is what the business of emergency preparedness is all about.

Contact: Emergency Preparedness Canada, Government Emergency Operation Co-ordination Centre, Ottawa, Ontario.

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UNDRO at Work

(Continued from 16)

international humanitarian co-operation. The Workshop, which was chaired by the Director of UNDRO, included in its agenda conceptual and operational aspects of international disaster management, disaster management training as an instrument to improve international humanitarian assistance, UNDRO's responsibilities in disaster management training and the presentation of selected modules and training materials of the DMTP.

■ From 19 to 31 August 1991, an UNDRO official attended a **UNHCR-Sponsored seminar on Disaster Management**, organized by the Disaster Management Centre of the University of Wisconsin. The seminar was also attended by officials from UNHCR, ICRC, MSF and representatives of the Governments of the USSR and Poland.

■ UNDRO hosted two Information Meetings in Geneva on 15 July: one meeting, chaired by Miss M.J. Anstee, Under-Secretary-General, was held to study the efforts to alleviate the **consequences of the Chernobyl disaster**; the second, chaired by Prince Sadruddin Aga Khan, was on the **current situation in Iraq**.

■ A mission from the USSR Civil Defence and Ministry of Foreign Economic Relations visited Geneva on 27 July-2 August prior to a Training Seminar on Strategical Aspects of Disaster Preparedness Planning to be held in Moscow from 28 October to 1 November.

■ Two UNDRO delegates undertook a mission to Bonn, Germany on 20-21 August to discuss UNDRO's activities within the field of search and rescue with officials from the German Ministry of Foreign Affairs. The creation of a SAR desk in UNDRO and the convening of an inaugural meeting for the International Search and Rescue Advisory Committee (INSARAC) were also on the agenda.

■ From 13 to 16 August 1991, an UNDRO staff member carried out a mission to Washington D.C. to meet with senior officials of the US State Department and US General Accounting Office (GAO) to discuss UNDRO's role in the Gulf Crisis and future perspectives on international assistance in emergency situations.

■ At the invitation of the authorities concerned, UNDRO's Director F. Mayrhofer-Grünbühel visited the capitals of the **Netherlands** and the **United Kingdom** to consult on current issues of international disaster management. In the Foreign Ministry at the Hague he met with the Director of the Multilateral Development Co-operation Department, Mr. de Jong, the Director of the International Organizations Department, Mr. Feith, the Head of the Humanitarian and emergency Aid Section, Mr. Van Voorst Tot Voorst and others. In London he had an extensive discussion in the Overseas Development Administration hosted by the Head of Information and Emergency Aid Department, Mr. Bearpark, and also attended by officials of his own department and the Foreign Office.

■ **Standard Communication Satellite test:** UNDRO'S portable satellite terminal was successfully tested for the transmission of reports between Beirut and Geneva.

■ **Visitors to UNDRO Headquarters in Geneva during the months of July/August 1991 included:**

Mr. A. Sh. Ismail, Minister of State for Foreign Affairs of Somalia, accompanied by the Minister Counsellor of the Permanent Mission of Somalia to the United Nations Office at Geneva (UNOG), *Mr. M.O. Dubad; Mr. B. Kouchner*, Secrétaire d'Etat auprès du Premier Ministre, Chargé de l'Action Humanitaire, accompanied by the Permanent Representative of France to the UNOG, *Ambassador B. Miyet; Mr. Michel Jobert* who gave a Lecture entitled 'Catastrophes : Nouvel ordre mondial et devoir d'ingérence'; *Ambassador J. Eliasson*, Permanent Representative of Sweden to the United Nations in New York; *Ambassador S. Drotodiningrat*, Permanent Representative of Indonesia to the UNOG; *Ambassador F. Guoxiang*, Permanent Representative of China to the UNOG; *Mrs. N.L. Escaler*, Ambassador, Permanent Representative of the Philippines to the UNOG; *Ambassador N.A. Elaraby*, Permanent Representative of Egypt to the UNOG, making a farewell call; *Ambassador M.N. Amani*, Permanent Representative of Afghanistan to the UNOG; *Mrs. S. Lyagoubi-Ouahchi*, Ambassador, Permanent Representative of Tunisia to the UNOG; *Mr. R. Veltheim*, Minister, Deputy Permanent Representative of Finland to the UNOG; *Mr. S. Kansu*, Director of Development Programme of International Trade Centre; *Mr. J. Perras*, Deputy Director of CIDA; *Mr. D. Laepke*, Director of Operations of Technical Aid Programme, Germany; *Mr. H. Hamdane*, First Secretary of the Permanent Mission of Lebanon to the UNOG; *Mr. J.P. Massué*, Secrétaire Executif au Conseil de l'Europe, Accord Partiel Ouvert en matière de prévention, de protection et d'organisation de secours contre les risques naturels et technologiques; *Mr. D. Verga*, First Counsellor of Italy of the Permanent Mission to the UNOG.

The Resident Co-ordinator in Somalia *(Mr. O. Hashim)* and the UNDRO delegate in Mozambique *(Mr. Friedrich)* visited UNDRO to provide first hand information in the countries where they serve and to be briefed on the activities of the Office.

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Book Review

African Disaster Handbook

The aim of the *African Disaster Handbook* is to provide simple, clear and useful guidelines on preparedness measures to take before a disaster strikes, and action to take when, and after, a disaster occurs. A short introduction to ten different types of disaster is followed by practical instructions on how to mitigate the consequences of: floods, hurricanes and storms, landslides, volcanoes, fires, chemical and industrial accidents, nuclear accidents, epidemics, and drought and famine. It is written in a simple style and is attractively and extensively illustrated.

The *Handbook*, designed to be readily understood by every member of the community, can serve as a useful tool for reducing the effects of disasters and as a base from which district health officers and health educators can develop their own guidelines for strengthening the readiness of the community. As such it has relevance for many other parts of the globe.

It has been prepared by the Panafrican Centre for Emergency Preparedness and Response, which functions as an integral part of the World Health Organizations's global Programme for Emergency Preparedness and Response. The *Handbook* has been produced as a contribution to the International Decade for Natural Disaster Reduction (IDNDR), and to promote the objectives of the 1991 World Health Day, "Should disaster strike, be ready!"

The 63-page Handbook costs US $12, and is available from: *WHO Panafrican Centre for Emergency Preparedness and Response, UNECA Building, P.O. Box 3050, Addis Ababa - Ethiopia.*

Managing Natural Disaster and the Environment

Published by: Environmental Policy & Research Division, Environment Department, the World Bank, 1991. A. Kreimer and M. Munasinghe (eds.).

In June 1990, at the beginning of the International Decade for Natural Disaster Reduction (IDNDR), the World Bank sponsored a colloquium on "The Environment and Natural Disaster Management", in Washington D.C., U.S.A. The colloquium was intended to promote the exchange of experiences and ideas about the environment and disaster management. *Managing Natural Disasters and the Environment* is a volume of selected papers from that colloquium, which explores the two-way relationship between environmental degradation and vulnerability disaster, and their combined effects on both natural and man-made disasters.

The volume is divided into four sections: the first section, on strategic issues, examines the implications of strategic global, systemic, and survival issues. Section two, on development, explores the continuum of response to disaster, from vulnerability to resilience, and examines different approaches to ensure the sustainability of development. The third section, on risk management, discusses the differences and similarities between natural hazards and man-made emergencies, and identifies generic issues that help define how best to organize institutions to deal with them. The final section, on reducing vulnerability to disaster, describes local, national and international efforts to coordinate prevention, mitigation and recovery efforts. The volume also includes case studies on projects in: Bangladesh, Bolivia, Brazil, China, Columbia, Ethiopia, Jamaica, Mexico, Nepal, Pakistan, Sri Lanka, Sudan, and the Yemen Arab Republic.

The volume is available, free of charge, from: *The World Bank, 1818 H Street, N.W., Washington, D.C., 20433, USA.*

Printed at United Nations, Geneva
GE.91-02531 - August 1991 - 8,000

ISSN 0250-9377
UNDRO/91/NL/4

Courtesy of

UNDRO News